



# Using a TTY

Telecommunications with individuals who are Deaf, Hard of Hearing, Deaf-Blind, or Speech Impaired

## **What is a TTY (or TDD, or TT)?**

TTY is an abbreviation of Teletypewriter. These were originally large bulky awkward devices used by the military and later used in newsrooms all over the world. In 1964, a Deaf physicist named Robert Weitbrecht invented an acoustic coupler (a modem) that would allow a standard teletypewriter to communication over existing phone lines.

For the first time since the invention of the telephone, deaf and hard of hearing individuals had access to the telephone. In the years since 1964, TTYs have become smaller, easier to use, and several new features have been added. Still, the underlying technology has changed very little.



Early TTY with acoustic modem

TDD is an acronym for Telecommunications Device for the Deaf. TDD is the term most often used in state and federal government services. For example, the Federal Communications Commission and the Americans with Disabilities Act both use the term TDD. A TDD is simply a TTY by another name.

TT is an acronym for Text Telephone. This term is rarely used. The preferred term used by most members of the deaf and hard of hearing community is TTY.

## **What are the differences between a modern desktop computer and a TTY?**

Today's computers communicate using a carrier wave and a protocol called ASCII. ASCII uses 256 characters and transmits over modern modems at speeds in excess of 56,000 bps.

TTYs still communicate using the original Baudot code which has no carrier wave, uses only 32 base characters, and transmits at 45.5 Baud.

Computers and TTYs cannot communicate with each other unless the TTY contains an ASCII code chip or the computer is fitted with a specialized TTY modem.

## **How do the limitations of Baudot code affect communications?**

Because Baudot code is transmitted acoustically, communications require one-way or one-at-a-time transmission. That means that two TTY users talking to each other via TTY must take turns.

The limited number of characters available in Baudot code has resulted in non-standardized keyboards. Instead of looking for seldom used keys, TTY users have developed alpha character substitutions for some punctuation, and completely omit other punctuation marks.

The average TTY user can type faster than Baudot code can transmit. Users have developed several commonly used abbreviations.

While deaf and hard of hearing users are accustomed to the slower pace of TTY communications, many new users are frustrated by the longer time required to complete an average call.



A combination TTY and amplified telephone. Great for use in environments with a variety of users.

## **How can you call a TTY user if you don't have a TTY?**

To call a TTY user, if you do not have a TTY, use the Telecommunications Relay Service (TRS, or "Relay"). In Hawai'i dial 1,511 (or 643-8255).

## **Are there special rules of Etiquette when using a TTY?**

Yes! Remember that the person on the other end of the line cannot hear your voice or see your face. Those parts of conversation normally conveyed by tone of voice, facial expression, or body language are all missing from a TTY conversation.

- Always identify yourself by name in your first turn of the conversation. "Hi, Bill Jones here. GA"
- Be sure to wait for your turn; wait for the "GA". The caller may pause for a moment to look up a number or consider their choice of words. If there is a long pause and you suspect the other person forgot to type "GA", ask, "Was that a GA QQ GA"
- Add comments to indicate any specific feelings you want to convey. Smile, Grin, Giggle, Frown (or Smile Down), Laughing, Huh QQ, Kidding, Grrr, and other comments help the other users understand your attitude as well as your words.
- Be direct: If you are rushed and need to complete a call quickly, say so. Try: "I'm sorry, I have another appointment in five minutes. May I return your call later today?"

- Be brief: Remember, the other person cannot interrupt you. Type short messages then let the other person take a turn before you continue.

## What abbreviations and substitutions are commonly used?

GA “Go Ahead”. This means “your turn” and is the rough equivalent of “over” used by radio operators. It is how TTY users effect the turn taking required by the limitations of Baudot Code.

SK “Stop Keying” This is used to indicate that the user is ending or getting ready to end the conversation.

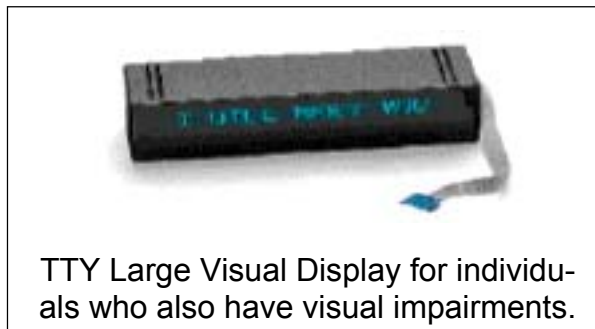
GA or SK Literally: “Go Ahead or Stop Keying”. This combination means, “I’m all done and ready to hang up unless you have something else to say?”

SKSK “I am hanging up now.”

XXXX Cancel or erase the last word of phase. Experienced TTY users normally do not use the Backspace key. Different generations of TTYs have located the Backspace key in different locations on the keyboard, and since transmission is immediate, the wrong characters have already appeared on the recipient’s TTY printer and cannot be physically erased.



TTY attached to a public pay phone. The drawer opens automatically when the unit detects TTY tones.



TTY Large Visual Display for individuals who also have visual impairments.

QQ “Question mark” Like the Backspace key, the “?” key has appeared in different locations on the keyboard. Experienced users quit looking for the wayward key and simply type “QQ” to indicate a question.

CD could

BTW by the way

CUZ or BCZ because

NBR- number

HD hold on

MTG meeting

OIC Oh, I see

PLS please

R are

U You

THX thanks

SHD should

TMW tomorrow

WD would

IM or I M I'm

## **Why does my TTY print garbage sometimes?**

Remember that the letters you type are converted to tones and sent over the phone line. Ambient noise - in the room on either end of the conversation - on in the phone line itself can interfere with clear transmission.

- If you are using an acoustic TTY, one that uses a traditional telephone handset placed in rubber cups on top of the TTY, be sure the handset is securely seated in the cups.
- Check for background noise that can be reduced or eliminated.
- Tap the space bar once or twice.
- Some older TTYs do not have a separate row of keys for the numerals. Those TTYs have a key to switch between the top row of letters and the numerals. Be sure you are typing letters, not numbers.
- If the text is so garbled you cannot understand, disconnect and redial the caller's number. Be sure to 'sign off' first. ('Sorry, all garbled. I will call you back in one minute. SKSK')

## **Who can you call for more help?**

Contact the Disability and Communication Access Board (DCAB) any of at the numbers listed below.

DCAB offers training and technical assistance to state agencies who serve deaf, hard of hearing, or deaf-blind consumers or who have deaf, hard of hearing, or deaf-blind employees. DCAB offers assistance in compliance with federal and state laws, including the Americans with Disabilities Act, Section 504 and 508 of the Rehabilitation Act, the Hearing Aid Compatibility Act, the Telecommunications Act, and others.

### ***Main Office (Oahu):***

Disability and Communication Access Board  
919 Ala Moana Blvd., Room 101  
Honolulu, Hawaii 96814  
(808) 586-8121, Voice or TTY  
(808) 586-8129, Fax

### ***Communication Access Specialist (Oahu):***

[Use TTY or Relay Service]  
For Voice to TTY Relay Service, dial: 711 then ask  
for TTY: (808) 586-8130  
Email: dcabjk@aloha.net

### ***Kauai:***

(808) 274-3308  
Voice or TTY

### ***Maui:***

(808) 984-8219  
Voice or TTY

### ***Big Island:***

Hilo: (808) 322-4841  
(Voice Mail)